PATENT Attorney Docket No. BECK1120-1

In re Application of:
Montero-Julian and Monseaux
Application No.: 10/684,268
Filing Date: October 10, 2003
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AMENDMENTS TO THE SPECIFICATION

Please amend the specification as set forth below.

Please replace paragraph [0077]:

"[0077] Recently, a short peptide sequence (StrepTagII.TM.) has been identified that demonstrates binding affinity (Kd 1 x 10⁻⁶M) for the biotin-binding site of a mutated streptavidin molecule, called StrepTactin. The molecule d-biotin, which binds with higher affinity to strepTactin (Kd 1 x 10⁻¹³M), effectively competes with the StrepTagII for the binding site. (Knabel, M., Franz, T. J., Schiemann, M., Wulf, A., Villmow, B., Schmidt, B., Bernhard, H., Wagner, H., Busch, D. H. (2002) Reversible MHC multimer staining for functional isolation of T-cell populations and effective adoptive transfer. Nature Medicine Vol. 8 No. 6, June 2002. pp: 631-637). Attachment of the MHC monomers to the solid surface can be accomplished by any method known in the art. For example, the solid surface can be coated with a first binding ligand, such as avidin, and the monomer is then provided with a second binding ligand, such as biotin, wherein the first ligand binds specifically with the second ligand. The second binding ligand may optionally be attached to the monomers via a C-terminal end. Attachment of the one or more monomers to the solid surface is optionally reversible or cleavable. For example, a cleavable binding complex is commercially available from Amersham Bioscience Bioscience (Orsay France) such as Factor Xa, PreScission Protease and thrombin. All of these proteases can be used with the GST affinity tag from proteins expressed using pGEX-T vectors."

with,

--[0077] Recently, a short peptide sequence (StrepTagH. STREPTAGII ™, a system which employs vectors that produce C-terminal fusion proteins that can be purified with immobilization via STEPTACTIN, available from IBA GmbH, Göttingen, Germany) has been identified that demonstrates binding affinity (Kd 1 x 10 6M) for the biotin-binding site of a mutated streptavidin molecule, called StrepTactin STREPTACTIN (a derivative of streptavidin with high affinity for STREPTAGII™, available from IBA GmbH, Göttingen, Germany). The molecule d-biotin, which binds with higher affinity to StrepTactin STREPTACTIN (Kd 1 x 10 13 M),

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effectively competes with the StrepTagH STREPTAGIITM for the binding site. (Knabel, M., Franz, T. J., Schiemann, M., Wulf, A., Villmow, B., Schmidt, B., Bernhard, H., Wagner, H., Busch, D. H. (2002) Reversible MHC multimer staining for functional isolation of T-cell populations and effective adoptive transfer. Nature Medicine Vol. 8 No. 6, June 2002. pp: 631-637). Attachment of the MHC monomers to the solid surface can be accomplished by any method known in the art. For example, the solid surface can be coated with a first binding ligand, such as avidin, and the monomer is then provided with a second binding ligand, such as biotin, wherein the first ligand binds specifically with the second ligand. The second binding ligand may optionally be attached to the monomers via a C-terminal end. Attachment of the one or more monomers to the solid surface is optionally reversible or cleavable. For example, a cleavable binding complex is commercially available from Amersham Bioscience Bioscience (Orsay France) such as Factor Xa, PreScission Protease PRESCISSION PROTEASE TM (a genetically engineered fusion protein consisting of human rhinovirus 3C proteinase and GST which facilitates removal of proteases by immobilization and cleavage of GST fusion proteins produced pGEX-T vectors, available from GE Healthcare, Piscataway, NJ) and thrombin. All of these proteases can be used with the GST affinity tag from proteins expressed using pGEX-T vectors.-

Please amend paragraph [0084]:

"[0084] The MHC monomer can be attached to the solid surface by any suitable means known in the art. For example, the MHC monomer can be immobilized to a surface either directly or indirectly, e.g., via an anchoring or connecting entity. In one embodiment, the solid surface of the invention system is coated with a first ligand entity, which binds to or interacts with a second ligand connected to or within the MHC monomer, e.g., via covalent or noncovalent bond. In another embodiment, the surface is coated with avidin or its derivatives, e.g., streptavidin, and the MHC monomer contains biotin or its derivatives as its anchor domain. Attachment of the MHC monomer to the solid surface, in one embodiment of the invention, is reversible or cleavable."

with.

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--[0084] The MHC monomer can be attached to the solid surface by any suitable means known in the art. For example, the MHC monomer can be immobilized to a surface either directly or indirectly, e.g., via an anchoring or connecting entity. In one embodiment, the solid surface of the invention system is coated with a first ligand entity, which binds to or interacts with a second ligand connected to or within the MHC monomer, e.g., via covalent or noncovalent bond. In another embodiment, the surface is coated with avidin or its derivatives, e.g., NEUTRAVIDIN (a modified avidin derivative devoid of glycosylation, which allows for low non-specific binding) streptavidin, and the MHC monomer contains biotin or its derivatives as its anchor domain. Attachment of the MHC monomer to the solid surface, in one embodiment of the invention, is reversible or cleavable.--